

Exhibit 300: Capital Asset Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview & Summary Information

Date Investment First Submitted: 2009-06-30
Date of Last Change to Activities: 2012-06-22
Investment Auto Submission Date: 2012-02-28
Date of Last Investment Detail Update: 2012-06-22
Date of Last Exhibit 300A Update: 2012-08-15
Date of Last Revision: 2012-08-15

Agency: 010 - Department of the Interior **Bureau:** 12 - United States Geological Survey

Investment Part Code: 01

Investment Category: 00 - Agency Investments

1. Name of this Investment: USGS - Water - National Water Information System (NWIS)

2. Unique Investment Identifier (Ull): 010-000001049

Section B: Investment Detail

- Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

As part of the U.S. Geological Survey's (USGS) program of disseminating water data to the public, the USGS maintains a distributed network of computers and file servers for the acquisition, processing, review, storage and dissemination water data collected through its activities at more than 1.54 million sites around the country. This system is called the National Water Information System (NWIS). Data quickly and easily available from NWIS are essential to the implementation and successful completion of a broad range of interpretive studies addressing groundwater, surface-water, water-quality, and water-use issues that are critical to USGS partners in Local, State, Tribal, and Federal government as well as the international community. For example, the hydrologic data stored and made available by NWIS are used not only for determining the adequacy of water supplies, but also for implementing flood-warning systems; designing dams, bridges, and flood control projects; allocating irrigation water; locating sources of pollution, planning for energy development; and investigating the contamination potential of water supplies due to natural and human influences. - Water data acquired, quality assured and disseminated via NWIS remain critical to meeting the USGS mission and other Federal and State Agencies with water management. - NWIS supports Open Government by providing timely information to the public and as a data-source to other USGS, government and commercial users. - The NWIS web site contributes to the public's awareness of the importance of USGS streamgages and

information. In 2010, the web site had over 500 million hits and a annual customer satisfaction rating of 95%. - Data and information from NWIS are a key component of Data.gov. - NWIS is the authoritative source for obtaining USGS water data supporting USGS strategic science initiatives. - NWIS contains data collected over the last 100+ years as well as real-time data both of which are online and easily available/accessible from one system via the web. Beneficiaries: Multiple Agencies - EPA, National Weather Service and their Weather Forecast Centers and River Forecast Centers - and other NOAA bureaus, US Army Corps of Engineers, DOE, USGS and other DOI bureaus. State, tribal, and local governments. Hundreds of partners in the Cooperative Water Program. Private sector consultants, engineers, and scientists. Schools, colleges, and universities. The public.

2. How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an assessment of the program impact if this investment isn't fully funded.

The NWIS is the water data system that supports the major USGS Water Programs and other critical DOI activities in the DOI 2011-2016 Strategic Plan Mission Area "Provide a Scientific Foundation for Decision-making", Strategy #4: "Monitor and assess water availability and quality." Water data and information readily available from NWIS supports the major USGS Water Programs and other DOI activities that are critical to both the Climate Change and the Water Conservation DOI Strategic Plan High Priority Goals, including the WaterSMART initiative. NWIS supports the DOI IRM Strategic Goal to Enable transparency and accessibility of information and services to the public. Data made READILY AVAILABLE to the PUBLIC from the NWIS web site are critical to water managers and decision-makers. Maintenance improvements to NWIS will increase the amount and type of water data and related metadata available to customers, including more information about the quality of the data. Maintenance improvements made to the NWIS applications and interfaces to other agencies will increase customer satisfaction in the areas of ease, speed, and effectiveness of data access and data integration. If NWIS is not fully funded, funding reductions could impact operations of the real-time data infrastructure. Without the maintenance improvements, current systems could become overwhelmed creating delays in providing delivery of real-time data. During severe hydrologic events (like hurricanes and major floods), USGS might have to restrict/limit public access to real-time data to insure critical water managers have adequate accessibility. Funding reductions could delay future technology refreshes and the 2013 maintenance updates, some of which support the Science Strategies for Water Availability and Climate Change. The reduction could also impact the coordination and integration of a potential COTS package that will improve the USGS time-series water data processing critical to USGS Water Programs (like the National Streamflow Information Program). Without adequate planning and preparation for the smooth integration of the COTS (and retirement of older subsystems), USGS could lose its capability to meet new demands and efficiencies needed to maintain key State and Local Cooperators.

3. Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added, or operational efficiency achieved.

NWIS - Improved map-based interfaces for data input and output - Provided additional metadata and reporting capabilities to improve data quality (QA/QC) and data-integration - Improved ability to store history of changes to key data - Improved web services to promote

more efficient data mining and second-use potential, particularly by smart-phone apps. - Cleaned up legacy data-attributes and removed unused software functionality - Fixed over 300 reported software problems. - The pro-active monitoring and upgrades to NWISWeb system continue to handle record level usage and provide very high customer satisfaction. NWIS national operations of real-time data acquisition and delivery systems provide reliability and redundancy with no loss/outage in availability. - NWIS continues participation and collaboration with USGS groups and other partners (NOAA, EPA, Consortium of Universities of Advancement of Hydrologic Science) in the area of web-services and data-sharing.

4. Provide a list of planned accomplishments for current year (CY) and budget year (BY).

Operations and maintenance activities with the following highlights. Data Delivery (NWISWeb subsystems) (Data Sharing and Integration) - NWISWeb continues improvements to data delivery by improving web services and increasing the amount and types of data available. - Continue collaboration and support in promoting NWIS web/data services as the feed to others in USGS and strategic partners - Improved site-identification services and water-data-catalog service will support more robust geospatial data-discovery services (cooperative work with other USGS Science Programs, CUAHSI, OGC, USEPA and NOAA). - Customer-driven improvements to NWISWeb public user-interface will be made to sustain high user satisfaction with focus on improving the on-line help system. Data Acquisition and Processing (core-NWIS field-center subsystems) - Continue to refresh field-center servers and move to the enterprise supported DBMS. - Improve regression testing and data-migration validation tools. - Continue improvements to NWIS applications and database interfaces using data-services to facilitate the use of more third-party software/COTS. Likely integration of a major COTS application 2013+ that would retire one of the existing NWIS subsystems (the time-series data processing subsystem). All NWIS subsystems - Continue to improve database, metadata and applications for better data integration/sharing/reuse within USGS, DOI and strategic partners. - Plan and prepare for the longer-term DOI initiatives for more efficient IT. NWIS will investigate the potential to consolidate field-center data-acquisition systems to achieve IT efficiencies and increased user-performance, and to reduce the need to duplicate data. The investigation and initial planning may identify the need for seeking additional funds/approvals for future modernization projects. - Full security re-certification and accreditation (C&A) by 7/2012.

5. Provide the date of the Charter establishing the required Integrated Program Team (IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.

2011-07-26

Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	\$0.0	\$0.0	\$0.0	\$0.0
DME (Excluding Planning) Costs:	\$0.0	\$0.0	\$0.0	\$0.0
DME (Including Planning) Govt. FTEs:	\$0.0	\$0.0	\$0.0	\$0.0
Sub-Total DME (Including Govt. FTE):	0	0	0	0
O & M Costs:	\$57.3	\$2.5	\$2.0	\$1.9
O & M Govt. FTEs:	\$47.8	\$5.4	\$5.6	\$5.7
Sub-Total O & M Costs (Including Govt. FTE):	\$105.1	\$7.9	\$7.6	\$7.6
Total Cost (Including Govt. FTE):	\$105.1	\$7.9	\$7.6	\$7.6
Total Govt. FTE costs:	\$47.8	\$5.4	\$5.6	\$5.7
# of FTE rep by costs:	403	38	39	38
Total change from prior year final President's Budget (\$)		\$0.0	\$0.0	
Total change from prior year final President's Budget (%)		0.00%	0.00%	

2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:

No changes from President's Budget Request.

Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value (\$M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
Awarded		ING11PC00015									
Awarded		ING11PX00971									
Awarded		ING08PC91397									
Awarded		ING12PX01055	GS35F0209R	1434							

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:

Earned Value is not required since the NWIS is a steady state investment and earned value is not required for small simplified acquisitions and service contracts. However costs and schedule data are reported monthly to the Bureau and Agency Investment Review Boards. NWIS Contracts currently used are fixed-price, government wide service/acquisition contracts, and task orders issued against existing contracts. Contracts for hardware and software purchases are established based on the life cycle of the system. For hardware and software purchases of commercially available (commodity) products and services, NWIS uses Department of Interior "enterprise-wide" contracts and the NASA SEWP-IV contract. Hardware and COTS support and maintenance services are aggregated within USGS for potential cost savings and full-competition, and are multi-year contracts to cover the software life cycle (SLC). Contracts for software technical consulting and development services are established as needs arise in the SLC. For current technical software development services, NWIS is using specific services and task orders on existing agency performance-based contracts. Using task orders for specific products and investigations gives NWIS flexibility in initiating and monitoring task-order projects. Each task-order project is lead by a technical member of the NWIS team who provides the written objective, goals and requirements of task. Except for compliance to business requirements and preferred Technical Reference Model (TRM) components, the task orders are structured so that contractors are free to investigate and provide multiple designs alternatives prior to beginning the implementation of the government-preferred design.

Exhibit 300B: Performance Measurement Report

Section A: General Information

Date of Last Change to Activities: 2012-06-22

Section B: Project Execution Data

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost (\$M)
NWIS-0001	FY11 Maintenance and Support	FY11 Maintenance, Operations and Support, including quarterly metadata updates and regular software maintenance updates and support.			
NWIS-0002	FY12 Database Management System (DBMS) Technology Refresh, Maintenance & Operations	NWIS will be performing a technology refresh of the commercial DBMS to agency enterprise solution. Software/applications will be converted and data will be migrated. The project consists of the modifications/preparations, full testing and verification, formal acceptance, Beta-site implementation and general release. The project also includes regular software maintenance updates and support.			

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities	End Point Schedule Variance	End Point Schedule Variance (%)	Cost Variance (\$M)	Cost Variance (%)	Total Planned Cost (\$M)	Count of Activities
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Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities (\$M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance (\$M)	Cost Variance (%)	Total Planned Cost (\$M)	Count of Activities
		(\$M)	(in days)					
NWIS-0001	FY11 Maintenance and Support							
NWIS-0002	FY12 Database Management System (DBMS) Technology Refresh, Maintenance & Operations							

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)
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NONE

Section C: Operational Data

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
% customers surveyed that were satisfied with NWISWeb system/data	% of total responses of simple satisfaction	Customer Results - Customer Benefit	Over target	90.000000	90.000000	92.000000	90.000000	Semi-Annual
# of retrievals of groundwater and surface-water quantity and quality data and information	in Millions accumulated during year.	Mission and Business Results - Services for Citizens	Over target	153.980000	174.610000	283.258614	183.340000	Quarterly
% of software modules that have automated regression testing	number of software modules	Process and Activities - Management and Innovation	Over target	26.200000	45.000000	62.000000	65.000000	Semi-Annual
% of annual User-group requirements or improvements implemented	number of requirements	Technology - Effectiveness	Over target	85.000000	92.000000	92.600000	93.000000	Semi-Annual
Database Licensing and Technical Support	Accumulated annual Costs in \$	Technology - Technology Costs	Under target	480150.000000	523800.000000	523800.000000	567450.000000	Quarterly
Availability of NWIS web site	% time system is available and accessible	Technology - Reliability and Availability	Over target	96.000000	97.000000	99.950000	97.000000	Monthly